

REMARKS

Regarding the status of the present application, Claims 6 and 12-17 have been amended, and Claims 1-17 are pending in this application. Reconsideration of this application is respectfully requested.

Claims 1-17 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,114,265 issued to Grisley in view of U.S. Patent No. 4,809,755 issued to Pontikas. The teachings of the Grisley patent have been discussed in previous responses.

The Pontikas patent discloses "Apparatus and a method for forming various types of woodworking joints on workpieces are provided. A series of templates are provided that, when utilized with the appropriate cutting bit for a router produce the desired joint configuration. The router is mounted below a support platform with the cutting bit of the router extending upwardly through a central aperture in the support platform. A guide bushing fixed to the support platform surrounds the cutter bit. A selected template is fixed to fence posts that extend upwardly from the template. The fence posts secure a fence to the template. The fence has clamps that clamp a workpiece to the fence so that the workpiece can be positioned over the edge patterns on the template. Handles are secured to the fence posts and the fence. With the workpiece in a proper position over the edge patterns on the template, the template, the fence posts, the fence, the handles, and the workpiece are moved as a unit over the router support platform with the edge pattern of the template in contact with the guide bushing surrounding the router cutting bit. The appropriate joint configuration is thereby cut into the workpiece. By changing the template or by changing the angle of the fence or the position of the workpiece, various joint configurations can be produced. Among the joint configurations that can be produced are through dovetail joints, angled dovetail joints, blind dovetail joints, box joints, splined joints, mock dovetail joints, and angled box joints."

The Examiner essentially indicated that the Grisley patent substantially discloses the present invention but admitted that "Grisley lacks disclosure of the first and second members, when joined, being disposed at a predetermined noncollinear angle with respect to each other." The Pontikas patent is cited as teaching "first 114 and second 116 members, when joined, being disposed at a predetermined noncollinear angle with respect to each other in order to provide an angled joint (see figure 20; column 6 lines 61-68)."

With regard to the Grisley patent, it is respectfully submitted that none of the joints disclosed therein have a structure wherein a cavity is formed in a first flat member that has a depth that extends a predetermined distance below the first flat surface, and wherein a second flat member has a tab formed therein that has a thickness that substantially matches the depth of the cavity formed in the first flat member. Note that in the present invention, the cavity is formed in the first member that is about one half the thickness of the first member, and the mating, interlocking tab has a thickness that is about one half the thickness of the second member so as to fit in the cavity in the first member.

It is respectfully submitted that this is not the case with the joints disclosed in the Grisley patent. Note that, in the planar joint structure shown in Fig. 5, the routed joints and mating cavities are the full thickness of the wood piece. There is no disclosure or suggestion in the Grisley patent regarding the use of interlocking joints wherein the indents and protrusions are a portion of the thickness of the respective wood pieces, as is employed in the present invention.

Similarly, with regard to the Pontikas patent, it is respectfully submitted that none of the joints disclosed therein have a structure wherein a cavity is formed in a first flat member that has a depth that extends a predetermined distance below the first flat surface, and wherein a second flat member has a tab formed therein that has a thickness that substantially matches the depth of the cavity formed in the first flat member. The only joint structures relating to the formation of planar structures (shown in Fig. 20) uses a plurality of dovetail joints wherein the protrusions and cutouts are the entire thickness of the respective wood pieces. There is no disclosure or suggestion in the Grisley patent regarding the use of interlocking joints wherein the indents and protrusions are a portion of the thickness of the respective wood pieces, as is employed in the present invention.

Therefore, with regard to Claim 1, it is respectfully submitted that the Grisley and Pontikas patents, taken singly or together, do not disclose or suggest a joint system comprising "a cavity formed in the first flat member ... that has a depth that extends a predetermined distance below the first flat surface, and wherein the depth of the cavity is a predetermined portion of the thickness of the first flat member" and "a second flat member ... having a tab ... that ... fits within the cavity, which tab has a thickness that substantially matches the depth of the cavity formed in the first flat member." [Emphasis added] Thus, in the invention recited in claim 1, the tab and the cavity have a thickness and depth that are a portion of the overall thickness of the first and second flat members. This is not the case with the joints disclosed in the Grisley and Pontikas patents.

Therefore, it is respectfully submitted that Claim 1 is not obvious in view of, the Grisley and Pontikas patents, taken singly or together. Accordingly, withdrawal of the Examiner's rejection and allowance of Claim 1 are respectfully requested.

Dependent Claims 2-5 are considered patentable based upon their dependence from allowable Claim 1. Accordingly, withdrawal of the Examiner's rejection and allowance of Claims 2-5 are respectfully requested.

With regard to amended Claim 6, it has been amended to recite that the first flat member comprises a single cavity, and that the single cavity has a depth that extends a predetermined distance below the first flat surface. Furthermore, Claim 6, it has been amended to recite that the second flat member comprises a single tab that fits within the single cavity.

With regard to the Grisley patent, it is respectfully submitted that all of the joints disclosed therein have a plurality of "curved jigsaw puzzle shaped indents with protrusions between the indents". It is respectfully submitted that the Grisley patent does not disclose or

suggest the use of a single protrusion used in conjunction with a single mating cavity to interlock two mating flat members. All of the joints disclosed in the Grisley patent involve the use of a plurality of "curved jigsaw puzzle shaped protrusions with curved jigsaw puzzle shaped indents between the protrusions." There is no disclosure or suggestion in the Grisley patent regarding the use of a single protrusion that mates with a single indent or cavity.

The Pontikas patent, with reference to Fig. 20, discloses formation of a plurality of dovetail joints that are used to interconnect abutting ends of two members at a corner. With regard to all of the embodiments disclosed in the Pontikas patent, none of them relate to the use of a single protrusion used in conjunction with a single mating cavity to interlock two mating flat members. All of the joints disclosed in the Pontikas patent involve the use of a plurality of interlocking joints. There is no disclosure or suggestion in the Pontikas patent regarding the use of a single protrusion that mates with a single cavity.

Furthermore, as was argued with regard to Claim 1, it is respectfully submitted that the Grisley and Pontikas patents, taken singly or together, do not disclose or suggest the use of a tab and cavity that have a thickness and depth that are a portion of the overall thickness of the first and second flat members. All of the joints disclosed in the Grisley and Pontikas patents have dovetails and mating cavities that are the entire thickness of the respective wood pieces.

Therefore, with regard to Claim 6, it is respectfully submitted that the Grisley and Pontikas patents, taken singly or together, do not disclose or suggest a first flat member ... that "comprises a single cavity having a predetermined inner contour, which single cavity is exposed at the first flat surface; and is exposed along a portion of an edge of the first flat member, which single cavity has a depth that extends a predetermined distance below the first flat surface" and "a second flat member ... that comprises a single tab with an outer contour that substantially matches the inner contour of the single cavity and that fits within the single cavity.

In the present invention, the tab and cavity have a thickness and depth that are a portion of the overall thickness of the first and second flat members. This is not the case with the joints disclosed or suggested by the Grisley and Pontikas patents, taken singly or together.

Therefore, it is respectfully submitted that Claim 6 is not obvious in view of, the Grisley and Pontikas patents, taken singly or together. Accordingly, withdrawal of the Examiner's rejection and allowance of Claim 6 are respectfully requested.

Dependent Claims 7-11 are considered patentable based upon their dependence from allowable Claim 6. Accordingly, withdrawal of the Examiner's rejection and allowance of Claims 7-11 are respectfully requested.

Claim 12 has been amended to recite a joint system comprising first, second and third flat members as are shown in the drawing figures of the present application. Claim 12 recites the allowable subject matter that is present in Claim 1 regarding the fact that the flat members comprise tabs and cavities that are portions of the thicknesses of the respective flat members. As was argued above, this is not disclose or suggested by the Grisley and Pontikas patents, taken singly or together.

With specific regard to Claim 12, it is respectfully submitted that the Grisley and Pontikas patents, taken singly or together, do not disclose or suggest a first flat member that "comprises a cavity having ... a depth that extends a first predetermined distance below the first flat surface", a second flat member that "comprises a cavity" that "has a depth that extends a second predetermined distance below the first flat surface", and "a third flat member ... that comprises first and second tabs with outer partially curved contours that substantially match the respective inner partially curved contours of the first and second cavities and that fit within the respective first and second cavities, and wherein the first, second and third flat members, when joined, lie in the same plane and are disposed at a predetermined noncollinear angles with respect to each other."

Therefore, it is respectfully submitted that Claim 12 is not obvious in view of, the Grisley and Pontikas patents, taken singly or together. Accordingly, withdrawal of the Examiner's rejection and allowance of Claim 12 are respectfully requested.

Dependent Claims 13-17 are considered patentable based upon their dependence from allowable Claim 12. Accordingly, withdrawal of the Examiner's rejection and allowance of Claims 13-17 are respectfully requested.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure to the extent indicated by the Examiner.

In view of the above, it is respectfully submitted that all pending claims are not obvious in view of the cited references, taken singly or together, and are therefore patentable. Therefore, it is respectfully submitted that the present application is in condition for allowance. Accordingly, reconsideration of this application and allowance thereof are earnestly solicited.

Respectfully submitted,



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